

# Prof. HACI MEHMET ŞAHİN

## Personal Information

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## International Researcher IDs

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Publons / Web Of Science ResearcherID: JEZ-4428-2023

Yoksis Researcher ID: 1597

## Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Makine Eğitimi, Turkey 1994 - 1997

Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, Makine Mühendisliği, Turkey 1991 - 1994

Undergraduate, Erciyes University, Mühendislik Fakültesi, Makina Mühendisliği, Turkey 1987 - 1991

## Foreign Languages

English, C1 Advanced

## Certificates, Courses and Trainings

Foreign Language, İngilizce Hazırlık, Orta Doğu Teknik Üniversitesi, 1997

## Dissertations

Doctorate, Mars veya daha uzak gezegenlere gönderilecek bir uzay kargo gemisinin füzyon roket motorunun tasarımı, Gazi University, 1997

Postgraduate, Dumansız yakıt üretimi ve hava kirliliğine etkisi, Erciyes University, Fen Bilimleri Enstitüsü, 1994

## Research Areas

Energy, Nuclear Energy, Thermodynamics, Heat and Mass Transfer

## Academic Titles / Tasks

Professor, Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2023 - Continues

Professor, Karabuk University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2019 - 2023

Professor, Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2011 - 2019

Professor, Gazi University, Teknik Eğitim Fakültesi, Makina Eğitimi, 2007 - 2011

Associate Professor, Gazi University, Teknik Eğitim Fakültesi, Makina Eğitimi, 2002 - 2007  
Assistant Professor, Gazi University, Teknik Eğitim Fakültesi, Makina Eğitimi, 2000 - 2002  
Assistant Professor, Nigde Omer Halisdemir University, Mühendislik Mimarlık Fakültesi, Makine Mühendisliği, 1998 - 2000  
Research Assistant, Gazi University, Teknik Eğitim Fakültesi, Makina Eğitimi, 1993 - 1998

## Academic and Administrative Experience

Fakülte Yönetim Kurulu Üyesi, Karabuk University, Teknoloji Fakültesi, 2019 - 2023  
Manager of Research and Application Center, Gazi University, Teknoloji Transferi Uygulama Ve Araştırma Merkezi, 2013 - 2016  
Chairman of the BAP Committee, Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2012 - 2016  
Rector's Advisor, Gazi University, 2012 - 2016  
BAP Scientific Commissioner, Gazi University, -, 2012 - 2016  
Head of Department, Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2010 - 2016  
Fakülte Kurulu Üyesi, Gazi University, Teknoloji Fakültesi, 2008 - 2016  
Member of the Senate, Gazi University, 2009 - 2015  
Farabi Program Institutional Coordinator, Gazi University, Teknoloji Fakültesi, 2010 - 2013  
Head of Department, Gazi University, Teknik Eğitim Fakültesi, Makina Eğitimi, 2008 - 2010  
Assistant Director of Vocational School, Gazi University, Atatürk Meslek Yüksekokulu, 2002 - 2005  
Deputy Head of Department, Nigde Omer Halisdemir University, Mühendislik Mimarlık Fakültesi, Makine Mühendisliği, 1998 - 2000  
Assistant Director of the Institute, Nigde Omer Halisdemir University, Fen Bilimleri Enstitüsü, 1999 - 1999

## Courses

Termodinamik, Undergraduate, 2023 - 2024  
İleri Termodinamik, Postgraduate, 2023 - 2024  
Enerji Sistemleri Mühendisliğine Giriş, Undergraduate, 2023 - 2024

## Advising Theses

Şahin H. M., Efficiency analysis of fixed and axis tracking options of photovoltaic systems to be installed in a Marina, Postgraduate, H.NAJMALDDİN(Student), 2023  
Şahin H. M., Bir füzyon reaktöründe farklı soğutucuların trityum üretimine etkisinin nötronik incelenmesi, Postgraduate, B.MENGÜLLÜOĞLU(Student), 2022  
Şahin H. M., Neutronic investigation of the effect of first wall material composition and thickness on reactor structure performance in a fusion reactor, Doctorate, M.MOHAMAD(Student), 2022  
Şahin H. M., Güneş kolektörleri yardımıyla ısı pompası sistemi performans analizi, Postgraduate, H.İBRAHİM(Student), 2021  
ŞAHİN H., Thermo Hydraulic Analysis Of A Parabolic Trough Solar Collector Using In Solar Thermal Power Plants, Postgraduate, M.Demirci(Student), 2015  
Şahin H., Experimental investigation of hydrodynamic and thermal performance of cooling elements (FIN) in an electronical system, Postgraduate, M.Altınsoy(Student), 2013  
Şahin H., Numerical thermal-hydraulic analysis of a gas cooling high temperature reactor, Doctorate, Ö.Akbayır(Student), 2012  
Şahin H., Exergy and thermoeconomics analysis and optimization of Afşin-Elbistan B coal fired power plant, Doctorate, A.Ege(Student), 2012

- ŞAHİN H. M., SAH&#272;N H., Neutronic analysis of a high temperature nuclear reactor by using different fuels, Doctorate, Ö.Erol(Student), 2012
- Şahin H. M., Burner designing and manufacturing in natural gas, continuous heat treatment furnaces and optimization of natural gas consumption by flue gas analysis, Doctorate, S.İskender(Student), 2012
- Şahin H., Investigation of energy performance of a thermal power plant according to the energy management systems, Postgraduate, M.Saim(Student), 2012
- Şahin H. M., Karayolu taşıtlarında enerji verimliliği ve etki eden faktörlerin incelenmesi, Postgraduate, G.TAŞIN(Student), 2011
- Şahin H. M., İÇ İÇE BORULU YAY TİPİ TÜRBÜLATÖRLÜ BİR ISI DEĞİŞTİRİCİSİNDE TÜRBÜLANS MODELİNİN ISI TRANSFERİNE ETKİSİNİN İNCELENMESİ, Postgraduate, M.YİĞİT(Student), 2010
- Şahin H. M., Eşmerkezli borulu ısı değiştiricilerinde helisel türbülatorlerin etkilerinin deneysel ve sayısal olarak incelenmesi, Doctorate, E.BAYSAL(Student), 2009
- ÇETİNKAYA C., ŞAHİN H. M., 304 tipi paslanmaz çeliklerin MIG kaynağındaki ısı transferinin sonlu elemanlar yöntemiyle analizi, Doctorate, T.FINDIK(Student), 2008
- ŞAHİN H., NUMERICAL ANALYSIS OF THE EFFECT ON THE COMBI BOILER EFFICIENCY OF HEAT EXCHANGER DIFFERENT FIN GEOMETRIES USED IN THE COMBI BOILERS, Doctorate, A.Rıza(Student), 2007
- Şahin H. M., Nükleer enerji ile hidrojen üretimi ve küresel ısınmaya etkileri, Postgraduate, A.HİKMET(Student), 2006
- KOCATEPE K., ŞAHİN H. M., Katılma sırasında döküm-kalıp ara yüzeyinde ısı transfer katsayısının incelenmesi, Doctorate, N.AKAR(Student), 2006
- Şahin H. M., Kayseri Şeker Fabrikası şeker üretim proseslerinde enerji ve ekserji analizi, Postgraduate, E.KOÇYİĞİT(Student), 2004
- Şahin H. M., Doğal uranyum ve toryum ihtiva eden CANDU yakıt çubuğunda rejim halinde üç boyutlu ısı transferinin sonlu farklar metodu ile incelenmesi, Postgraduate, E.BAYSAL(Student), 2003
- Şahin H. M., Bir toryum füzyon reaktöründe nükleer atıkların değerlendirilmesi, Postgraduate, Y.KILIÇ(Student), 2002

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Neutronic analysis of a tokamak hybrid blanket cooled by thorium-molten salt fuel mixture**  
ŞAHİN H. M., TUNÇ G., Karakoç A.  
Progress in Nuclear Energy, vol.174, 2024 (SCI-Expanded)
- II. **Design studies for A 50 MWth molten salt fast reactor**  
Şahin S., Şahin H. M., Tunç G., Şahiner H.  
PROGRESS IN NUCLEAR ENERGY, vol.166, 2023 (SCI-Expanded)
- III. **Numerical analyses of the concentrated solar receiver pipes with superheated steam**  
KURT E., Demirci M., Sahin H. M.  
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART A-JOURNAL OF POWER AND ENERGY, vol.236, no.5, pp.893-910, 2022 (SCI-Expanded)
- IV. **Neutronic study on the effect of first wall material thickness on tritium production and material damage in a fusion reactor**  
Sahin H. M., Tunç G., Karakoc A., Omar M. M.  
NUCLEAR SCIENCE AND TECHNIQUES, vol.33, no.4, 2022 (SCI-Expanded)
- V. **Generation-IV reactors and nuclear hydrogen production**  
Şahin S., Şahin H. M.  
International Journal of Hydrogen Energy, vol.46, no.57, pp.28936-28948, 2021 (SCI-Expanded)
- VI. **Development of an air velocity and flow measurement system by using a novel circular disc**  
Şahin H. M., Saim Soysal M.  
Flow Measurement and Instrumentation, vol.78, 2021 (SCI-Expanded)
- VII. **Monte Carlo analysis of LWR spent fuel transmutation in a fusion-fission hybrid reactor system**  
Sahin S., Sahin H. M., Tunc G.  
NUCLEAR ENGINEERING AND TECHNOLOGY, vol.50, no.8, pp.1339-1348, 2018 (SCI-Expanded)

- VIII. **Evaluation of the radiation damage parameters of ODS steel alloys in the first wall of deuterium-tritium fusion-fission (hybrid) reactors**  
Tunç G., Sahin H. M., Sahin S.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, no.1, pp.198-206, 2018 (SCI-Expanded)
- IX. **Preface to the special issue on "17th International Conference on Emerging Nuclear Energy Systems (ICENES'2015), 4-8 October 2015, Istanbul, Turkey"**  
ŞAHİN S., Sahin H. M., Martinez-Val J., Wu Y.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.17, pp.6981-6983, 2016 (SCI-Expanded)
- X. **Investigation of tritium breeding ratio using different coolant material in a fusion-fission hybrid reactor**  
Sahin H. M., Tunç G., Şahin N.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.17, pp.7069-7075, 2016 (SCI-Expanded)
- XI. **Investigation of a gas turbine-modular helium reactor using reactor grade plutonium with Th-232 and U-238**  
ŞAHİN S., EROL Ö., Sahin H. M.  
PROGRESS IN NUCLEAR ENERGY, vol.89, pp.110-119, 2016 (SCI-Expanded)
- XII. **Uncertainties in energy and exergy efficiency of a High Pressure Turbine in a thermal power plant**  
Ege A., Sahin H. M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.17, pp.7197-7205, 2016 (SCI-Expanded)
- XIII. **Influence of void fraction on BWR spent fuel direct recycling scenario**  
Waris A., Su'ud Z., Sahin H. M., KURT E., ŞAHİN S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.40, no.44, pp.15172-15178, 2015 (SCI-Expanded)
- XIV. **Investigation of heat transfer enhancement in a new type heat exchanger using solar parabolic trough systems**  
Sahin H. M., Baysal E., Dal A. R., ŞAHİN N.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.40, no.44, pp.15254-15266, 2015 (SCI-Expanded)
- XV. **Weapons Grade Plutonium utilization with fertile materials in a Gas Turbine-Modular Helium Reactor**  
EROL Ö., Sahin H. M.  
ANNALS OF NUCLEAR ENERGY, vol.85, pp.917-924, 2015 (SCI-Expanded)
- XVI. **Determination of uncertainties in energy and exergy analysis of a power plant**  
Ege A., Sahin H. M.  
ENERGY CONVERSION AND MANAGEMENT, vol.85, pp.399-406, 2014 (SCI-Expanded)
- XVII. **Experimental and numerical investigation of thermal characteristics of a novel concentric type tube heat exchanger with turbulators**  
Sahin H. M., Baysal E., Dal A. R.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.37, no.9, pp.1088-1102, 2013 (SCI-Expanded)
- XVIII. **Chemical exergy analysis of Afsin-Elbistan lignite and its effects on the thermal power plant exergy efficiency**  
Sahin H. M., Ege A.  
INTERNATIONAL JOURNAL OF EXERGY, vol.13, no.4, pp.508-522, 2013 (SCI-Expanded)
- XIX. **Effect of thermal parameters on performance of modular helium reactors**  
Sahin H. M., Akbayir O., KOCAR C.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.36, no.15, pp.1395-1402, 2012 (SCI-Expanded)
- XX. **Developments in nuclear and renewable energy applications**  
Sahin H. M.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.36, no.15, pp.1325, 2012 (SCI-Expanded)
- XXI. **LIFE hybrid reactor as reactor grade plutonium burner**  
ŞAHİN S., Sahin H. M., ACIR A.  
ENERGY CONVERSION AND MANAGEMENT, vol.63, pp.44-50, 2012 (SCI-Expanded)
- XXII. **Utilization of thorium in a Gas Turbine - Modular Helium Reactor**

- Sahin H. M., EROL Ö., ACIR A.  
ENERGY CONVERSION AND MANAGEMENT, vol.63, pp.25-30, 2012 (SCI-Expanded)
- XXIII. **Alternative operating conditions for the Modular Helium Reactor**  
Sahin H. M., Akbayir O.  
ENERGY CONVERSION AND MANAGEMENT, vol.63, pp.31-37, 2012 (SCI-Expanded)
- XXIV. **Commercial utilization of weapon grade plutonium as TRISO fuel in conventional CANDU reactors**  
ŞAHİN S., Sahin H. M., ACIR A.  
ENERGY CONVERSION AND MANAGEMENT, vol.63, pp.17-24, 2012 (SCI-Expanded)
- XXV. **REDUCTION OF WEAPON GRADE PLUTONIUM INVENTORIES IN A THORIUM BURNER**  
ŞAHİN S., Sahin H. M., ACIR A.  
FUSION SCIENCE AND TECHNOLOGY, vol.61, pp.250-255, 2012 (SCI-Expanded)
- XXVI. **Utilization of thorium in a Gas Turbine-Modular Helium Reactor with alternative fuels**  
Sahin H. M., EROL Ö.  
ENERGY CONVERSION AND MANAGEMENT, vol.53, no.1, pp.224-229, 2012 (SCI-Expanded)
- XXVII. **UTILIZATION OF REACTOR GRADE PLUTONIUM AS ENERGY MULTIPLIER IN THE LIFE ENGINE**  
ŞAHİN S., Sahin H. M., ACIR A.  
FUSION SCIENCE AND TECHNOLOGY, vol.61, pp.216-221, 2012 (SCI-Expanded)
- XXVIII. **Criticality and burnup analyses of a PBMR-400 full core using Monte Carlo calculation method**  
ACIR A., Coskun H., Sahin H. M., EROL Ö.  
ANNALS OF NUCLEAR ENERGY, vol.38, pp.298-301, 2011 (SCI-Expanded)
- XXIX. **Progress in nuclear and renewable energy options and efficient energy use**  
Sahin H. M.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.35, no.2, pp.79-80, 2011 (SCI-Expanded)
- XXX. **An innovative nuclear reactor for electricity and desalination**  
ŞAHİN S., Sahin H. M., Al-Kusayer T. A., Sefidvash F.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.35, no.2, pp.96-102, 2011 (SCI-Expanded)
- XXXI. **Analysis of exergy and energy of sugar production process in sugar plant**  
Sahin H. M., Acir A., Altunok T., Baysal E., Kocyigit E.  
JOURNAL OF THE ENERGY INSTITUTE, vol.83, no.3, pp.178-185, 2010 (SCI-Expanded)
- XXXII. **Criticality and burn up evolutions of the Fixed Bed Nuclear Reactor with alternative fuels**  
Sahin S., Sahin H. M., ACIR A.  
ENERGY CONVERSION AND MANAGEMENT, vol.51, no.9, pp.1781-1787, 2010 (SCI-Expanded)
- XXXIII. **Utilization of TRISO fuel with reactor grade plutonium in CANDU reactors**  
Sahin S., Sahin H. M., ACIR A.  
NUCLEAR ENGINEERING AND DESIGN, vol.240, no.8, pp.2066-2074, 2010 (SCI-Expanded)
- XXXIV. **Criticality investigations for the fixed bed nuclear reactor using thorium fuel mixed with plutonium or minor actinides**  
Sahin S., Sahin H. M., ACIR A., Al-Kusayer T. A.  
ANNALS OF NUCLEAR ENERGY, vol.36, no.8, pp.1032-1038, 2009 (SCI-Expanded)
- XXXV. **Monte Carlo calculation for various enrichment lithium coolant using different data libraries in a hybrid reactor**  
Sahin H. M., ACIR A., Altinok T., YALÇIN Ş.  
ENERGY CONVERSION AND MANAGEMENT, vol.49, no.7, pp.1960-1965, 2008 (SCI-Expanded)
- XXXVI. **CANDU reactor as minor actinide/thorium burner with uniform power density in the fuel bundle**  
Sahin S., YALÇIN Ş., YILDIZ K., Sahin H. M., ACIR A., ŞAHİN N.  
ANNALS OF NUCLEAR ENERGY, vol.35, no.4, pp.690-703, 2008 (SCI-Expanded)
- XXXVII. **Investigation of the properties of the nuclei used on the new generation reactor technology systems**  
Tel E., Sahin H. M., KAPLAN A., AYDIN A., Altinok T.  
ANNALS OF NUCLEAR ENERGY, vol.35, no.2, pp.220-227, 2008 (SCI-Expanded)
- XXXVIII. **Experimental study on the effect of liquid metal superheat and casting height on interfacial heat transfer coefficient**

- Akar N., Sahin H. M., Yalcin N., Kocatepe K.  
EXPERIMENTAL HEAT TRANSFER, no.1, pp.83-98, 2008 (SCI-Expanded)
- XXXIX. **Monte Carlo calculation of radiation damage in first wall of an experimental hybrid reactor**  
Sahin H. M.  
ANNALS OF NUCLEAR ENERGY, vol.34, no.11, pp.861-870, 2007 (SCI-Expanded)
- XL. **3-D numerical study on the correlation between variable inclined fin angles and thermal behavior in plate fin-tube heat exchanger**  
Sahin H. M., Dal A. R., Baysal E.  
APPLIED THERMAL ENGINEERING, vol.27, pp.1806-1816, 2007 (SCI-Expanded)
- XLI. **Increased fuel burn up in a CANDU thorium reactor using weapon grade plutonium**  
Sahin S., Yildiz K., Sahin H. M., Sahin N., Acir A.  
NUCLEAR ENGINEERING AND DESIGN, vol.236, no.17, pp.1778-1788, 2006 (SCI-Expanded)
- XLII. **Investigation of CANDU reactors as a thorium burner**  
Sahin S., Yildiz K., Sahin H. M., Acir A.  
ENERGY CONVERSION AND MANAGEMENT, vol.47, pp.1661-1675, 2006 (SCI-Expanded)
- XLIII. **The investigation of the neutron emission spectra of Th-232 and U-238 for neutron incident energy from 2 to 18 MeV**  
Tel E., Sahin H. M., Arasoglu A., Aytakin H.  
ANNALS OF NUCLEAR ENERGY, vol.33, no.4, pp.310-324, 2006 (SCI-Expanded)
- XLIV. **Determination of unidirectional heat transfer coefficient during unsteady-state solidification at metal casting-chill interface**  
Sahin H. M., Kocatepe K., Kayıkcı R., Akar N.  
ENERGY CONVERSION AND MANAGEMENT, no.1, pp.19-34, 2006 (SCI-Expanded)
- XLV. **Radiation shielding calculations for the vista spacecraft**  
Sahin S., Sahin H. M., Acir A.  
ENERGY CONVERSION AND MANAGEMENT, vol.46, pp.2345-2358, 2005 (SCI-Expanded)
- XLVI. **Effects of spectral shifting in an inertial confinement fusion system**  
ŞAHİN S., Şahin H. M., Yildiz K., ACIR A.  
Kerntechnik, vol.70, no.4, pp.233-242, 2005 (SCI-Expanded)
- XLVII. **An assessment of thorium and spent LWR-fuel utilization potential in CANDU reactors**  
Sahin S., Sahin H. M., Alkan M., Yildiz K.  
ENERGY CONVERSION AND MANAGEMENT, vol.45, pp.1067-1085, 2004 (SCI-Expanded)
- XLVIII. **Neutronics analysis of HYLIFE-II blanket for fissile fuel breeding in an inertial fusion energy reactor**  
Sahin S., Yalcin S., Sahin H. M., Ubeyli M.  
ANNALS OF NUCLEAR ENERGY, vol.30, no.6, pp.669-683, 2003 (SCI-Expanded)
- XLIX. **Neutronic investigation of a hybrid version of the ARIES-RS fusion reactor**  
Sahin S., Yalcin S., Sahin H. M., Ubeyli M.  
ANNALS OF NUCLEAR ENERGY, vol.30, no.2, pp.245-259, 2003 (SCI-Expanded)
- L. **Investigation of the effects of the resonance absorption in a fusion breeder blanket**  
Sahin S., Sahin H. M., Yildiz K.  
ANNALS OF NUCLEAR ENERGY, vol.29, no.14, pp.1641-1660, 2002 (SCI-Expanded)
- LI. **Elimination of the coil shielding for MFE-reactors through a liquid-protected first-wall**  
Sahin S., Sahinaslan A., Sahin H. M.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.27, pp.173-186, 2002 (SCI-Expanded)
- LII. **Reduced shielding mass for the VISTA spacecraft**  
Sahin S., Sahin H. M., Sahinaslan A.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.27, pp.187-196, 2002 (SCI-Expanded)
- LIII. **Power flattening and minor actinide burning in a thorium fusion breeder**  
Sahin S., Sahin H. M., SÖZEN A., Bayrak M.  
ENERGY CONVERSION AND MANAGEMENT, vol.43, no.6, pp.799-815, 2002 (SCI-Expanded)
- LIV. **Optimization of the radiation shielding mass for the magnet coils of the VISTA spacecraft**

- Sahin S., Sahin H. M.  
ANNALS OF NUCLEAR ENERGY, vol.28, no.14, pp.1413-1429, 2001 (SCI-Expanded)
- LV. **Radiation shielding mass saving for the magnet coils of the VISTA spacecraft**  
Sahin S., Sahin H. M.  
ANNALS OF NUCLEAR ENERGY, vol.26, no.6, pp.509-521, 1999 (SCI-Expanded)
- LVI. **Evaluation of the neutron and gamma-ray heating in the radiation shielding and magnet coils of the VISTA spacecraft**  
Sahin S., Sahin H. M., SÖZEN A.  
FUSION TECHNOLOGY, vol.33, no.4, pp.418-434, 1998 (SCI-Expanded)
- LVII. **Radiation damage in liquid-protected first-wall materials for IFE-reactors**  
Sahin S., Moir R., Sahinaslan A., Sahin H. M.  
FUSION TECHNOLOGY, vol.30, no.3, pp.1027-1035, 1996 (SCI-Expanded)

## Articles Published in Other Journals

- I. **İç İçe Borulu Yay Tip Türbülantörlü Bir Isı Değiştiricisinin RNG k-ε Türbülans Modeli ile Sayısal Analizi**  
ŞAHİN H. M., Dal A. R., ÖZKAYA M.  
Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, vol.8, no.1, pp.64, 2020 (Peer-Reviewed Journal)
- II. **Isı Eşanjörlerinde Isı Transferi İyileştirme Yöntemlerinin Sayısal ve Deneysel Olarak İncelenmesi**  
BORAN K., Filiz D., ŞAHİN H. M., AKTAŞ M.  
Politeknik, vol.17, no.4, pp.183-191, 2014 (Peer-Reviewed Journal)
- III. **Enerji ve Ekserji Analiz Metoduyla Kayseri Seker Fabrikasında Enerji Verimliliğinin Değerlendirilmesi**  
ŞAHİN H. M., BAYSAL E., Koçyiğit E.  
Gazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, vol.22, pp.111-119, 2007 (Scopus)
- IV. **Ötektik Al Si Alaşımında Soğutucu Yüzey Pürüzlülüğünün Arayüzey Isı Transfer Katsayısına Etkisi**  
Şahin H. M., Kocatepe K., Kayıkcı R., Akar N.  
Gazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, vol.21, pp.473-481, 2006 (Scopus)
- V. **The effect of surface roughness of chill on the interfacial heat transfer coefficient in eutectic Al Si casting**  
Şahin H. M., Kocatepe K., Kayıkcı R., Akar N.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.21, no.3, pp.473-481, 2006 (Scopus)
- VI. **ThO<sub>2</sub> UO<sub>2</sub> Yakıt Karışımını İçeren CANDU Yakıt Çubuklarındaki Sıcaklık Dağılımının Sayısal Çözümlemesi**  
ŞAHİN H. M., BAYSAL E., ACIR A.  
Gazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, 2005 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Nuclear Energy**  
ŞAHİN S., ŞAHİN H. M.  
in: Comprehensive Energy Systems, Ibrahim Dincer, Editor, Elsevier, pp.795-849, 2018

## Refereed Congress / Symposium Publications in Proceedings

- I. **Efficiency analysis of fixed and axis tracking options of photovoltaic systems to be installed in a marina**  
Dal A. R., Nasraldeen H. N., ŞAHİN H. M.  
11. European Conference on Renewable Energy Systems, Riga, Latvia, 18 May 2023
- II. **Industrial Nuclear Hydrogen Production**  
ŞAHİN S., ŞAHİN H. M.  
13th INTERNATIONAL EXERGY, ENERGY AND ENVIRONMENT SYMPOSIUM (IEEEES-13), Mekke, Saudi Arabia, 14 March 2022
- III. **NEUTRONIC INVESTIGATION ON TRITIUM BREEDING AND DIFFERENT COOLANTS IN A FUSION REACTOR**  
ŞAHİN H. M., MENGÜLLÜOĞLU B.  
4. Uluslararası Mühendislik Bilimleri ve Multidisipliner Yaklaşımlar Kongresi, İstanbul, Turkey, 03 November 2022
- IV. **NUCLEAR HYDROGEN PRODUCTION**  
ŞAHİN S., ŞAHİN H. M.  
7. ULUSLARARASI MÜHENDİSLİK VE TEKNOLOJİ YÖNETİMİ KONGRESİ, İstanbul, Turkey, 16 April 2022
- V. **Investigation of thorium alternative fuel mixtures in a gas turbine modular helium reactor**  
ŞAHİN S., ŞAHİN H. M., EROL Ö.  
19th International Conference on Emerging Nuclear Systems, Balvi, Latvia, 6 - 09 October 2019
- VI. **YAY TİPİ TÜRBÜLATÖRLÜ İÇ İÇE BORULU BİR ISI DEĞİŞTİRİCİSİNİN STANDART k-ε TÜRBÜLANS MODELLERİ İLE NÜMERİK ANALİZİ**  
ŞAHİN H. M., ÖZKAYA M., Dal A. R.  
22. Isı Bilimi ve Tekniği Kongresi / 22nd Congress on Thermal Science and Technology, Turkey, 11 - 14 September 2019
- VII. **Numerical Analyses of the Concentrated Solar Receiver Pipes with Superheated Steam**  
ŞAHİN H. M., DEMİRCİ M., KURT E., Dal A. R.  
7th EUROPEAN CONFERENCE ON RENEWABLE ENERGY SYSTEMS, Madrid, Spain, 10 - 12 June 2019
- VIII. **NUMERICAL ANALYSIS OF A HEAT EXCHANGER IN A THERMAL ENERGY STORAGE SYSTEM**  
KOŞAN M., ŞAHİN H. M.  
INTERNATIONAL CONFERENCE ON ENGINEERING TECHNOLOGY AND INNOVATION (ICETI'2017), Sarajevo, Bosnia And Herzegovina, 22 - 26 March 2017, pp.387-394
- IX. **Investigation of effect on heat transfer of different turbulent model in a concentric tube heat exchanger with coiled wire turbulator**  
ŞAHİN H. M., YİĞİT M.  
15th "International Scientific Conference" RE & IT - 2016, SMOLYAN - BULGARIA, SMOLYAN, Bulgaria, 10 - 11 June 2016
- X. **SIMULATION OF HYBRID THERMAL INSTALLATIONS**  
Aleksandar G., ŞAHİN H. M., Rumen P., Kurtuluş D., Nadezhda V., Emil T.  
The International Conference on Emerging Nuclear Energy Systems (ICENES2015), 4 - 08 October 2015
- XI. **COMPARATIVE STUDIES ON PLUTONIUM UTILIZATION IN SMALL MODULAR REACTOR WITH URANIUM AND THORIUM OXIDE FUELS**  
Abdul W., Zaki S., Sidik P., ŞAHİN H. M., ŞAHİN S.  
The International Conference on Emerging Nuclear Energy Systems (ICENES2015), 4 - 08 October 2015
- XII. **REVIEW ON SOLAR COMBISYSTEMS AND THERMAL ENERGY STORAGE WITH PHASE CHANGE**  
Kurtuluş D., ŞAHİN H. M.  
SOLAR\_TR\_2014, Turkey, 19 - 21 November 2014
- XIII. **Investigation of heat transfer enhancement and friction characteristic in a heat exchanger with coiled wire turbulators**  
ŞAHİN H. M., BAYSAL E., Dal A. R., ŞAHİN N.  
4TH INTERNATIONAL CONFERENCE ON NUCLEAR AND RENEWABLE ENERGY RESOURCES, Antalya, Turkey, 26 - 29 October 2014
- XIV. **CHEMICAL EXERGY ANALYSIS OF A NATURAL GAS COMBUSTION CHAMBER AND ITS EFFECTS ON**



## **EXERGY EFFICIENCY**

ŞAHİN H. M., Ege A., İskender S.

International Conference on Sustainable Energy Technologies (SET-2012), Vancouver, Canada, 2 - 05 September 2012

### **XV. Investigation of Heat Transfer Coefficient during Unsteady State Solidification at Casting Metal Mold Interface**

ŞAHİN S., ŞAHİN H. M., KOCATEPE K., AKAR N.

Proceedings of IMEC2004 International Mechanical Engineering Conference, 5 - 08 December 2004, pp.671-691

## **Supported Projects**

ŞAHİN H. M., Industrial Thesis Project, Çam Fıstığı Kozalağı Kurutma Sistemi Tasarımı ve İmalatı, 2010 - 2012

ŞAHİN H. M., Industrial Thesis Project, Doğal Gazlı Termal Radyasyonlu Sürekli Isıl İşlem Fırınlarında, Yanma Sistem Tasarımı, Hava -Yakıt Karışımının PIC ile Kontrolü,Yakıt Tüketimi ve Isı Transferinin Deneysel İncelenmesi, 2010 - 2012

ŞAHİN H. M., Project Supported by Higher Education Institutions, Toryum ve Çeşitli Nükleer Yakıtlar Kullanarak Bir Gaz Soğutmalı Yüksek Sıcaklık Reaktörünün Nötronik ve Termal Hidrolik Analizi, 2009 - 2012

ŞAHİN H. M., Project Supported by Higher Education Institutions, Eşmerkezli İç İçe Borulu Bir Isı Değiştiricisine Yerleştirilmiş Türbülötörlerin Isı Transferine Etkisinin Deneysel İncelenmesi, 2007 - 2010

ŞAHİN H. M., Project Supported by Higher Education Institutions, Endüstriyel ve güç üreten tesislerde ekonomiklik,verimlilik, ve çevre kirliliği açısından enerji ve analizi, 2005 - 2007

ŞAHİN H. M., Project Supported by Higher Education Institutions, Füzyon Reaktörlerinde Radyasyon Zırlaması, 2003 - 2005

ŞAHİN H. M., Project Supported by Higher Education Institutions, Uzay araçları için nükleer itici roket motorlarının geliştirilmesi, 2001 - 2003

## **Student Project**

Innovation Capacity Enhancement, ENERJİYİ YOĞUN KULLANAN BİR TESİSİN ENERJİ VERİMLİLİĞİNİN DEĞERLENDİRİLMESİ, Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, Turkey, 2014 - 2014

## **Activities in Scientific Journals**

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, Special Issue Editor, 2013 - 2014

INTERNATIONAL JOURNAL OF LOW CARBON TECHNOLOGIES, Committee Member, 2011 - 2014

JOURNAL OF POLYTECHNIC-POLITEKNİK DERGİSİ, First Editor, 2011 - 2014

INTERNATIONAL JOURNAL OF ENERGY RESEARCH, Special Issue Editor, 2009 - 2012

## **Memberships / Tasks in Scientific Organizations**

TMMOB-MMO, Principal Member, 1991 - Continues, Turkey

TÜBAV, Assistant Chairman of the Board, 2008 - 2016, Turkey

## **Tasks In Event Organizations**

Şahin H. M., NURER, Scientific Congress, Turkey, Eylül 2023

## **Metrics**

Publication: 81

Citation (WoS): 787

Citation (Scopus): 1016

H-Index (WoS): 18

H-Index (Scopus): 21

## **Non Academic Experience**

BİLİM SANAYİ VE TEKNOLOJİ BAKANLIĞI

Gazi Teknopark

Court, Ankara Adliyesi, Ankara Adliyesi

Makina Mühendisleri Odası